Push-to-talk over Cellular (PoC) service allows cell phones to be used as walkie-talkies. A group of users in a PoC session can communicate by simply pressing a button and speaking when the phone indicates it is OK to do so. The user releases the button when he or she is done speaking.

When a user begins to speak, the PoC server allocates resources and notifies other users in the PoC session that the user is speaking. The PoC server then delivers the speech packets to all the users in the session.

PoC is resource efficient as it allocates resources only when a user is actually speaking. This makes it suitable for applications where there are long gaps between individual session participants speaking.

This flows covers the case where PoC Client A invites PoC Client B to a Pre-established Session by sending SIP REFER request to PoC Server A.

This sequence diagram was generated with EventStudio System Designer 4.0 (http://www.EventHelix.com/EventStudio). Copyright © 2008 EventHelix.com Inc. All Rights Reserved. The EventStudio source files for this document can be downloaded from http://www.eventhelix.com/call-flow/ims-poc-pre-established.zip.
Media Burst Control Protocol (MBCP) Session Setup using RTCP Port

- **MBCP Connect**
  - protocol = RTCP APP
  - The PoC Server B sends the MBCP Connect to the PoC Client B. The message includes the PoC Session Identity.

- **MBCP Media Burst Acknowledgement**
  - protocol = RTCP APP
  - The PoC Client B acknowledges the reception of the MBCP Connect message.

Push-to-Talk session activated

- **NOTIFY**
  - The PoC Server A sends a SIP NOTIFY request via the IMS Core A towards the PoC Client A to inform about the progress of the session request.

- **MBCP Connect message**
  - protocol = RTCP APP
  - The PoC Client B acknowledges the reception of the MBCP Connect message.

- **ACK**
  - PoC Client A sends an ACK towards PoC Server A.

Push-to-Talk session activated

- **Talk Burst from PoC Client A to B**

  Permission to talk

- **MBCP Media Burst Granted**
  - protocol = RTCP APP
  - The floor has now been granted to PoC Client A.

- **MBCP Media Burst Taken**
  - protocol = RTCP APP
  - Indicate to PoC Client B that the floor has been assigned to PoC Client A.

- **MBCP Media Burst Acknowledgement**
  - protocol = RTCP APP
  - Acknowledge the media burst taken message.

- **PoC Client A Speaking Indication**
  - Notify the user that the floor has been granted to PoC Client A.

  Voice

- **RTP Media**
  - PoC Client A sends the RTP Media to the PoC Client B via PoC Server A and PoC Server B.

- **Push-to-Talk Button Released**

  - PoC Client A released the “Push-to-Talk” button to signal that he or she has stopped speaking.

  - Release of the Push-to-Talk button results in the media floor being released.

  Voice

- **MBCP Media Burst Release**
  - protocol = RTCP APP
  - PoC Server A informs all users in the PoC session that the floor is available for another user to speak.
**Floor is available indication**
Indicate to the user that the floor is available for speaking.

**Push-to-Talk Button Pressed**
PoC Client B wishes to speak so he or she presses the "Push-to-talk button" on the phone.

**Request the floor for the session.**

**The floor is granted.**

**Permission to talk**
Indicate to the user that the floor has now been granted.

**PoC Client B Speaking Indication**
Notify the user that the floor has been granted to PoC Client B.

**Voice**
The PoC Client B sends the RTP Media to the PoC Client A via PoC Server B and PoC Server A.

**Push-to-Talk Button Released**
PoC Client B released the "Push-to-Talk" button to signal that he or she has stopped speaking.

**The burst release is passed to the controlling PoC Server (PoC Server A)**

**PoC Server A informs all users in the PoC session that the floor is available for another user to speak.**

**Indicate to the user that the floor is available for speaking.**

**Floor is available indication**
Indicate to the user that the floor is available for speaking.